DISCLAIMER

The full text of certain NPDES permits and the associated fact sheets has been made available to provide online access to this public information. EPA is making permits and fact sheets available electronically to provide convenient access for interested public parties and as a reference for permit writers. The ownership of these documents lies with the permitting authority, typically a State with an authorized NPDES program.

While EPA makes every effort to ensure that this web site remains current and contains the final version of the active permit, we cannot guarantee it is so. For example, there may be some delay in posting modifications made after a permit is issued. Also note that not all active permits are currently available electronically. Only permits and fact sheets for which the full text has been provided to Headquarters by the permitting authority may be made available. Headquarters has requested the full text only for permits as they are issued or reissued, beginning November 1, 2002.

Please contact the appropriate permitting authority (either a State or EPA Regional office) prior to acting on this information to ensure you have the most up-to-date permit and/or fact sheet. EPA recognizes the official version of a permit or fact sheet to be the version designated as such and appropriately stored by the respective permitting authority.

The documents are gathered from all permitting authorities, and all documents thus obtained are made available electronically, with no screening for completeness or quality. Thus, availability on the website does not constitute endorsement by EPA.

Michael F. Easley, Governor
State of North Carolina

William G. Ross, Jr., Secretary
Department of Environment and Natural Resources

Coleen H. Sullins, Director
Division of Water Quality

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July 16, 2007

Kristoff T. Bauer
City Manager
P.O. Box 128
Jacksonville, North Carolina 28541

Subject: Issuance of NPDES Permit
Permit **NC0088455**
City of Jacksonville Nano-filtration WTP
Onslow County

Dear Mr. Bauer:

Division personnel have reviewed and approved your application for issuance of the subject permit. Accordingly, we are forwarding the attached final NPDES discharge permit. This permit is issued pursuant to the requirements of North Carolina General Statute 143-215.1 and the Memorandum of Agreement between North Carolina and the U.S. Environmental Protection Agency dated May 9, 1994 (or as subsequently amended).

There is one change in this permit from the draft previously submitted to you for review:

- The 5 mg/ L dissolved oxygen limit has been removed from the Effluent Limitations and Monitoring Requirements pages. Monitoring and reporting of dissolved oxygen will be required on a 2/ month basis with no limitation.

If any parts, measurement frequencies or sampling requirements contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing upon written request within thirty (30) days following receipt of this letter. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings (6714 Mail Service Center, Raleigh, North Carolina 27699-6714). Unless such demand is made, this permit shall be final and binding.

Please take notice that this permit is not transferable. This permit does not affect the legal requirements to obtain other permits which may be required by the Division of Water Quality or permits required by the Division of Land Resources, Coastal Area Management Act, or any other Federal or Local governmental permits which may be required, including an Authorization To Construct.

If you have any questions or need additional information, please do not hesitate to contact Jim McKay of my staff at (919) 733-5083, extension 595.

Sincerely,

for: Coleen H. Sullins

cc:Central Files
NPDES Unit Files
Wilmington Regional Office – Surface Water Protection
EPA Region 4
Aquatic Toxicology Unit

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

PERMIT

TO DISCHARGE WASTEWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

City of Jacksonville, NC

is hereby authorized to discharge wastewater from a facility located at the

City of Jacksonville Nano-filtration WTP
Gateway North
Jacksonville
Onslow County

to receiving waters designated as the New River in the White Oak River Basin in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III and IV hereof.

This permit shall become effective September 1, 2007.

This permit and authorization to discharge shall expire at midnight on July 31, 2012.

Signed this day July 16, 2007.

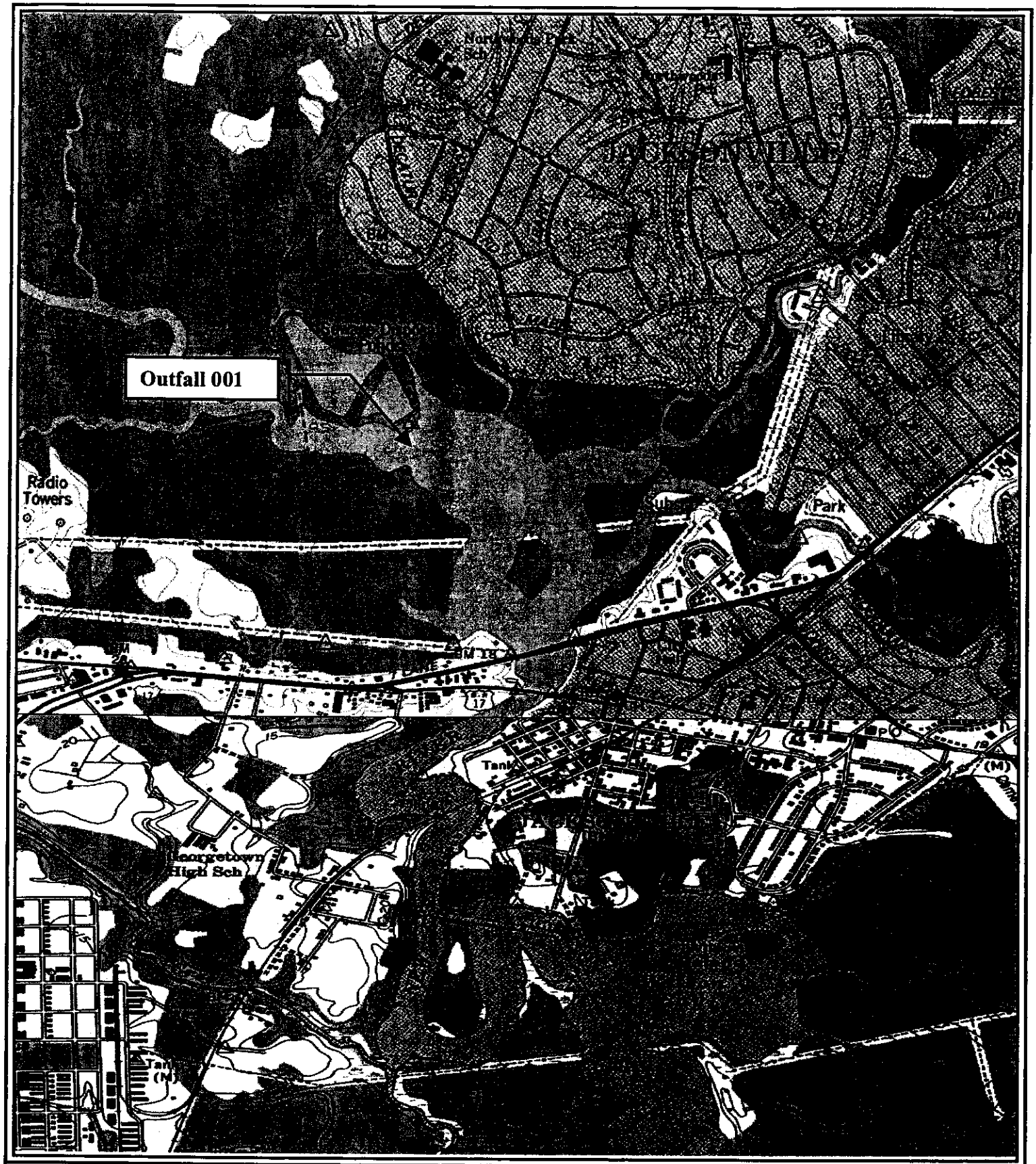
for: Coleen H. Sullins, Director
Division of Water Quality
By Authority of the Environmental Management Commission

SUPPLEMENT TO PERMIT COVER SHEET

City of Jacksonville, NC is hereby authorized to:

1. After obtaining an Authorization to Construct, construct and operate a drinking-water treatment plant with a discharge of Nano-Filtration Reject water.

2. Discharge from said treatment works located at Gateway North in Jacksonville at the City of Jacksonville Nano-filtration WTP in Brunswick County, at the location specified on the attached map into the New River, classified SB, NSW waters in the White Oak River Basin.



Jacksonville Nano-filter WTP - NC0088455

USGS Quad Name: H29 SW – Jacksonville N
Receiving Stream: New River
Stream Class: SB, NSW
Subbasin: White Oak – 03-05-01

Lat.: 34° 45' 34.97"
Long.: 77° 26' 22.62"

North

Facility Location

Onslow County

A. (1.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting until expansion above 4 million gallons per day drinking water capacity, the Permittee is authorized to discharge nano-filter reject water from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow	1.35 MGD		Daily	Continuous	Effluent
Temperature			2/ Month	Grab	E, U, D[1]
Salinity			2/ Month	Grab	E, U, D
Conductivity			2/ Month	Grab	E, U, D
pH[2]			Weekly	Grab	E, U, D
Dissolved Oxygen			2/ Month	Grab	E, U, D
Total Residual Chlorine[3]		13 ug/ L	Weekly	Grab	Effluent
Total Dissolved Solids			2/ Month	Grab	Effluent
Total Arsenic			2/ Month	Grab	Effluent
Total Copper			2/ Month	Grab	Effluent
Total Chlorides			2/ Month	Grab	Effluent
Total Iron			2/ Month	Grab	Effluent
Total Fluoride			2/ Month	Grab	Effluent
Total Zinc			2/ Month	Grab	Effluent
Ammonia Nitrogen			2/ Month	Grab	Effluent
Total Nitrogen (April 1 – October 31)	5.0 mg/ L		Weekly	Grab	Effluent
Total Nitrogen (November 1 – May 31)	10.0 mg/ L		Weekly	Grab	Effluent
Total Phosphorus	0.5 mg/ L		Weekly	Grab	Effluent
Whole Effluent Toxicity[4]			Quarterly	Grab	Effluent

Footnotes:

1. E is Effluent, U is at least 50 feet Upstream from the discharge location, D is at least 100 feet Downstream of the discharge location.
2. The pH shall not be less than 6.8 standard units nor greater than 8.5 standard units.
3. The Total Residual Chlorine limit is applicable only if chlorine is present in the waste water.
4. Chronic Whole Effluent Toxicity Testing using Mysid Shrimp at 10%; March, June, September and December; refer to Special Condition A (6).

All samples collected should be from a representative discharge event.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (2.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the expansion to 5 million gallons per day of drinking water capacity, and lasting until expansion above 5 million gallons per day drinking water capacity, the Permittee is authorized to discharge nano-filter reject water from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow	1.6875 MGD		Daily	Continuous	Effluent
Temperature			2/ Month	Grab	E, U, D[1]
Salinity			2/ Month	Grab	E, U, D
Conductivity			2/ Month	Grab	E, U, D
pH[2]			Weekly	Grab	E, U, D
Dissolved Oxygen			2/ Month	Grab	E, U, D
Total Residual Chlorine[3]		13 ug/ L	Weekly	Grab	Effluent
Total Dissolved Solids			2/ Month	Grab	Effluent
Total Arsenic			2/ Month	Grab	Effluent
Total Copper			2/ Month	Grab	Effluent
Total Chlorides			2/ Month	Grab	Effluent
Total Iron			2/ Month	Grab	Effluent
Total Fluoride			2/ Month	Grab	Effluent
Total Zinc			2/ Month	Grab	Effluent
Ammonia Nitrogen			2/ Month	Grab	Effluent
Total Nitrogen (April 1 – October 31)	5.0 mg/ L		Weekly	Grab	Effluent
Total Nitrogen (November 1 – May 31)	10.0 mg/ L		Weekly	Grab	Effluent
Total Phosphorus	0.5 mg/ L		Weekly	Grab	Effluent
Whole Effluent Toxicity[4]			Quarterly	Grab	Effluent

Footnotes:

1. E is Effluent, U is at least 50 feet Upstream from the discharge location, D is at least 100 feet Downstream of the discharge location.
2. The pH shall not be less than 6.8 standard units nor greater than 8.5 standard units.
3. The Total Residual Chlorine limit is applicable only if chlorine is present in the waste water.
4. Chronic Whole Effluent Toxicity Testing using Mysid Shrimp at 10%; March, June, September and December; refer to Special Condition A (6).

All samples collected should be from a representative discharge event.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (3.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the expansion to 6 million gallons per day of drinking water capacity, and lasting until expansion above 6 million gallons per day drinking water capacity, the Permittee is authorized to discharge nano-filter reject water from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow	2.025 MGD		Daily	Continuous	Effluent
Temperature			2/ Month	Grab	E, U, D[1]
Salinity			2/ Month	Grab	E, U, D
Conductivity			2/ Month	Grab	E, U, D
pH[2]			Weekly	Grab	E, U, D
Dissolved Oxygen			2/ Month	Grab	E, U, D
Total Residual Chlorine[3]		13 ug/ L	Weekly	Grab	Effluent
Total Dissolved Solids			2/ Month	Grab	Effluent
Total Arsenic			2/ Month	Grab	Effluent
Total Copper			2/ Month	Grab	Effluent
Total Chlorides			2/ Month	Grab	Effluent
Total Iron			2/ Month	Grab	Effluent
Total Fluoride			2/ Month	Grab	Effluent
Total Zinc			2/ Month	Grab	Effluent
Ammonia Nitrogen			2/ Month	Grab	Effluent
Total Nitrogen (April 1 – October 31)	5.0 mg/ L		Weekly	Grab	Effluent
Total Nitrogen (November 1 – May 31)	10.0 mg/ L		Weekly	Grab	Effluent
Total Phosphorus	0.5 mg/ L		Weekly	Grab	Effluent
Whole Effluent Toxicity[4]			Quarterly	Grab	Effluent

Footnotes:

1. E is Effluent, U is at least 50 feet Upstream from the discharge location, D is at least 100 feet Downstream of the discharge location.
2. The pH shall not be less than 6.8 standard units nor greater than 8.5 standard units.
3. The Total Residual Chlorine limit is applicable only if chlorine is present in the waste water.
4. Chronic Whole Effluent Toxicity Testing using Mysid Shrimp at 10%; March, June, September and December; refer to Special Condition A (6).

All samples collected should be from a representative discharge event.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (4.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the expansion to 7 million gallons per day drinking water capacity, and lasting until expansion above 7 million gallons per day drinking water capacity, the Permittee is authorized to discharge nano-filter reject water from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow	2.3625 MGD		Daily	Continuous	Effluent
Temperature			2/ Month	Grab	E, U, D[1]
Salinity			2/ Month	Grab	E, U, D
Conductivity			2/ Month	Grab	E, U, D
pH[2]			Weekly	Grab	E, U, D
Dissolved Oxygen			2/ Month	Grab	E, U, D
Total Residual Chlorine[3]		13 ug/ L	Weekly	Grab	Effluent
Total Dissolved Solids			2/ Month	Grab	Effluent
Total Arsenic			2/ Month	Grab	Effluent
Total Copper			2/ Month	Grab	Effluent
Total Chlorides			2/ Month	Grab	Effluent
Total Iron			2/ Month	Grab	Effluent
Total Fluoride			2/ Month	Grab	Effluent
Total Zinc			2/ Month	Grab	Effluent
Ammonia Nitrogen			2/ Month	Grab	Effluent
Total Nitrogen (April 1 – October 31)	5.0 mg/ L		Weekly	Grab	Effluent
Total Nitrogen (November 1 – May 31)	10.0 mg/ L		Weekly	Grab	Effluent
Total Phosphorus	0.5 mg/ L		Weekly	Grab	Effluent
Whole Effluent Toxicity[4]			Quarterly	Grab	Effluent

Footnotes:

1. E is Effluent, U is at least 50 feet Upstream from the discharge location, D is at least 100 feet Downstream of the discharge location.
2. The pH shall not be less than 6.8 standard units nor greater than 8.5 standard units.
3. The Total Residual Chlorine limit is applicable only if chlorine is present in the waste water.
4. Chronic Whole Effluent Toxicity Testing using Mysid Shrimp at 10%; March, June, September and December; refer to Special Condition A (6).

All samples collected should be from a representative discharge event.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (5.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the expansion to 8 million gallons per day drinking water capacity and lasting until expiration, the Permittee is authorized to discharge nano-filter reject water from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow	2.7 MGD		Daily	Continuous	Effluent
Temperature			2/ Month	Grab	E, U, D[1]
Salinity			2/ Month	Grab	E, U, D
Conductivity			2/ Month	Grab	E, U, D
pH[2]			Weekly	Grab	E, U, D
Dissolved Oxygen			2/ Month	Grab	E, U, D
Total Residual Chlorine[3]		13 ug/ L	Weekly	Grab	Effluent
Total Dissolved Solids			2/ Month	Grab	Effluent
Total Arsenic			2/ Month	Grab	Effluent
Total Copper			2/ Month	Grab	Effluent
Total Chlorides			2/ Month	Grab	Effluent
Total Iron			2/ Month	Grab	Effluent
Total Fluoride			2/ Month	Grab	Effluent
Total Zinc			2/ Month	Grab	Effluent
Ammonia Nitrogen			2/ Month	Grab	Effluent
Total Nitrogen (April 1 – October 31)	5.0 mg/ L		Weekly	Grab	Effluent
Total Nitrogen (November 1 – May 31)	10.0 mg/ L		Weekly	Grab	Effluent
Total Phosphorus	0.5 mg/ L		Weekly	Grab	Effluent
Whole Effluent Toxicity[4]			Quarterly	Grab	Effluent

Footnotes:

1. E is Effluent, U is at least 50 feet Upstream from the discharge location, D is at least 100 feet Downstream of the discharge location.
2. The pH shall not be less than 6.8 standard units nor greater than 8.5 standard units.
3. The Total Residual Chlorine limit is applicable only if chlorine is present in the waste water.
4. Chronic Whole Effluent Toxicity Testing using Mysid Shrimp at 10%; March, June, September and December; refer to Special Condition A (6).

All samples collected should be from a representative discharge event.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A.(6) CHRONIC TOXICITY PERMIT LIMIT (QUARTERLY)

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *mysid shrimp* (*Mysidopsis Bahia*), at an effluent concentration of 10%.

The permit holder shall perform at a minimum, *quarterly* monitoring using test procedures outlined in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed during the months of March, June, September and December. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code TGP3E for the pass/fail results and THP3E for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

Attention: North Carolina Division of Water Quality
Environmental Sciences Section
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.
NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.